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**Executive summary**

In Poirot v3, we add a binary feature `is_video_request` to the Poirot model. This is a query-level feature identifying requests for video ads. This helps us bid appropriately aggressively for video inventory on 3PE.

Key experimental results: surplus increase on 3PE (+0.27%), post-budget revenue increase for video ads on 3PE (+7.96%), small decrease in DBM net revenue (-0.06%) driven by shift in spending from AdX to 3PE.

**Context**

Poirot is a project which uses experimental bid reductions to infer the optimal bid multiplier on exchanges which are not running pure second-price auctions.

Currently we optimize the Poirot bid multiplier for each exchange, without distinguishing video vs. display. However, bidding dynamics are different for video ads; video is more inventory-constrained and bids tend to be higher. By doing separate optimizations for video and display, we can correct for this and win more video impressions.

See the original design doc for Poirot [here](#). See [this](#) doc for info on the updated model.

**Links**

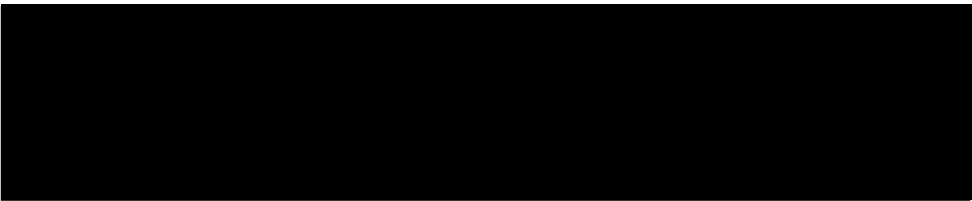
**Metrics Doc**

[Domain-level analysis](#)

[Post-budget revenue calculations](#)

[Old version of this doc \(with both proposed models\)](#)

**Modeling Solution**



However, we fit the model and solve the associated optimization problem for each 3-tuple (exchange, auction type, `is_video`), rather than for the pair (exchange, auction type).

The optimization problem is done [here](#).

**Updates to Serving**

**Commented [1]:** Just to confirm - this means the request itself is from a video context, as opposed to the request is asking for a video ad?

**Commented [2]:** It means the request is asking for a video ad.

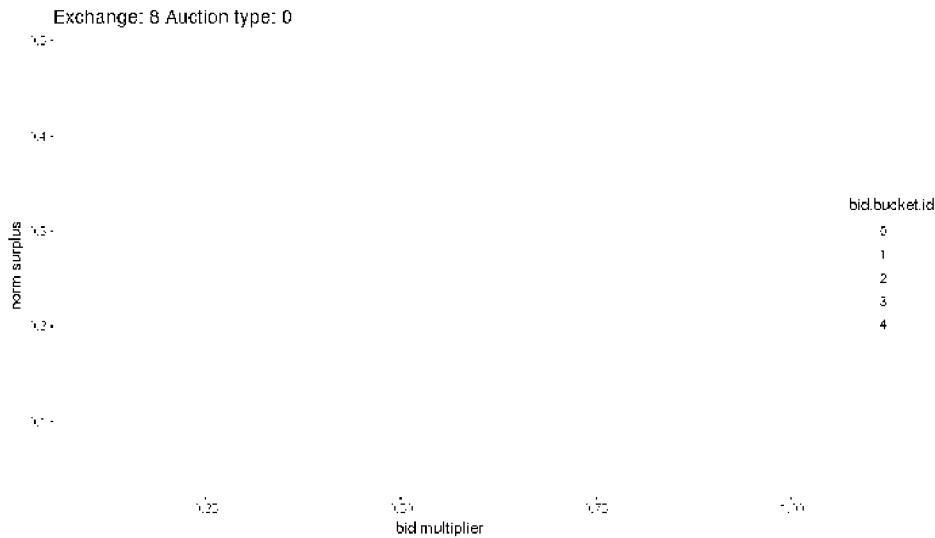
**Commented [3]:** given the launch candidate is `video_only`, can you have a separate doc where you only focus on the video only signal

**Commented [4]:** I'm editing this doc to remove references to the other model (non-launch candidate). I've added a copy of the original version of the doc under "Links".



Case study: Rubicon

Here are the [redacted]



In version B of the new model, we fit separate curves for video and non-video, resulting in more aggressive bidding for video and less aggressive bidding for non-video. This is shown below.

